

What Is Claimed Is:

SUB D1

1. A method for creating an anatomic working space in a body for a minilaparotomy procedure, comprising:

 forming a minilaparotomy opening in the body;

 forming a trocar opening in the body;

 inserting a trocar into the trocar opening;

 introducing a telescope through the trocar to observe and illuminate a first tissue to be surgically treated;

 inserting at least one first piercing retractor into the body through the opening, wherein the piercing retractor has first and second end portions;

 puncturing a wall of the body by the first end portion of the first piercing retractor; and

 lifting the wall of the body and moving around by using the first piercing retractor until a desirable anatomic working space is created in the body.

2. The method according to claim 1, further comprising:

inserting at least one second piercing retractor through the opening, wherein the second piercing retractor has first and second end portions;

puncturing the wall of the body by the first end portion of the second piercing retractor; and

holding back at least one second tissue by the second piercing retractor to expose and relocate the first tissue to create a desirable anatomic working space.

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3. The method according to claim 1, further comprising holding the first tissue by a forceps with a bent handle through the minilaparotomy opening to create a desirable anatomic working space.

4. The method according to claim 1, further comprising holding the first tissue by a needle driver with a bent handle through the minilaparotomy opening to create a desirable anatomic working space.

5. The method according to claim 1, further comprising connecting a grip to the first piercing retractor prior to lifting the wall of the body to create a desirable anatomic working space.

6. The method according to claim 1, further comprising securing the first end portion of the first piercing retractor to a retractor bar.

7. The method according to claim 1, wherein the laparoscopic opening is cut to be about 7 to 10 cm.

8. The method according to claim 1, wherein the first end portion of the first and second piercing retractors have an end sharp enough to puncture the wall of the body without using an additional surgical instrument.

9. The method according to claim 1, wherein the second end portion of the first piercing retractor has a blade wide enough to lift the wall of the body without damaging the wall.

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10. The method according to claim 1, wherein the second end portion of the first piercing retractor is detachable.

11. The method according to claim 1, wherein the second end portion of the second piercing retractor has a blade wide enough to hold back the second tissue.

12. The method according to claim 1, wherein the minilaparotomy procedure is applied to one of a general surgical procedure, extraperitoneal and transperitoneal kidney surgical procedures, adrenal surgical procedures, a bladder surgical procedure, transperitoneal and extraperitoneal prostate surgical procedures, transperitoneal and extraperitoneal ureter surgical procedures, a gynecologic procedure, a vascular surgical procedure, aortic and caval surgical procedures, an adrenal surgical procedure, a transplant surgical procedure, a neurosurgical surgical procedure, and an orthopedic surgical procedure.

13. The method according to claim 12, wherein the general procedure is applied to one of liver, pancreas, gall bladder, spleen, stomach, small bowel, large bowel, and rectum.

14. The method according to claim 12, wherein the extraperitoneal kidney surgical procedure is applied to one of nephrectomy, live donor nephrectomy, radical nephrectomy, nephrolithotomy, cyst marsupialization and partial nephrectomy.

15. The method according to claim 12, wherein the transperitoneal kidney surgical procedure is applied to one of nephrectomy, live donor nephrectomy, radical nephrectomy, nephrolithotomy, calicoplasty, calicorraphy and partial nephrectomy.

16. The method according to claim 12, wherein the bladder surgical procedure is applied to one of transperitoneal, extraperitoneal, cystectomy, cystotomy, urinary diversion using ileum or colon and vesicolithotomy.

17. The method according to claim 12, wherein the prostate surgical procedure is applied to one of radical prostatectomy and suprapubic prostatectomy.

18. The method according to claim 12, wherein the transperitoneal and extraperitoneal ureter surgical procedures are applied to one of ureterolithotomy, ureteroureteostomy, calicoureterostomy and ureteopyeloplasty.

19. The method according to claim 12, wherein the gynecologic procedure is applied to one of uterus, ovaries, fallopian tubes, and vagina.

20. The method according to claim 12, wherein the vascular surgical procedure is applied to one of arteries and veins.

21. The method according to claim 12, wherein the transplant surgical procedure is applied to one of liver, pancreas, small and large bowels, and kidney.

22. The method according to claim 12, wherein the neurosurgical surgical procedure is applied to one of spine, spinal cord, and peripheral nerves.

23. The method according to claim 12, wherein the orthopedic surgical procedure is applied to one of spine, spinal cord, and osseous structures.

24. A surgical instrument for creating an anatomic working space in a body for a minilaparotomy procedure, comprising:

a piercing retractor for lifting a wall of the body and having first and second end portions, wherein the first end portion has an end sharp enough to puncture the wall of the body without using an additional surgical instrument and the second end portion has a blade wide enough to lift the wall of the body without damaging the wall to create the anatomic working space.

25. The surgical instrument according to claim 24, wherein the second end portion has a through-hole having a diameter

greater than the first end portion and smaller than the second end portion.

26. The surgical instrument according to claim 24, further comprising a grip securing the first end portion of the first piercing retractor.

27. The surgical instrument according to claim 24, further comprising a retractor bar securing the first end portion of the first piercing retractor.

28. A surgical instrument for creating an anatomic working space in a body for a minilaparotomy procedure, comprising:

a piercing retractor for holding back tissues, relocating a first tissue to be surgically treated to provide the anatomic working space, wherein the piercing retractor has first and second end portions, and the first end portion has an end sharp enough to puncture the wall of the body without an additional surgical instrument and the second end portion has a blade wide

enough to hold back at least one second tissue and relocate the surgically treated tissue to the anatomic working space.

29. The surgical instrument according to claim 28, wherein the second end portion has a through-hole having a diameter greater than the first end portion and smaller than the second end portion.

30. The surgical instrument according to claim 28, further comprising a grip securing the first end portion of the piercing retractor.

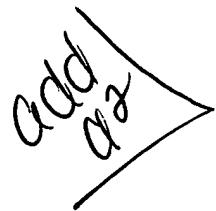
31. The surgical instrument according to claim 28, further comprising a retractor bar securing the first end portion of the piercing retractor.

32. A surgical instrument for creating an anatomic working space in a body for a minilaparotomy procedure, comprising:
a forceps for holding a surgically treated tissue through a minilaparotomy opening, wherein the forceps has an angled handle

wide enough to directly reach the surgically treated tissue through the minilaparotomy opening.

33. A surgical instrument for creating an anatomic working space in a body for a minilaparotomy procedure, comprising:

a needle driver for holding a needle through a minilaparotomy opening, wherein the needle driver has an angled handle wide enough to directly reach the surgically treated tissue through the minilaparotomy opening.



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